AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (canceled)

Claim 2 (currently amended): A method according to claim 36 ~~30~~, wherein the existence of corrupted or otherwise incorrect data in a particular sector on the optical disc signifies that that disc is not original whereby its use may be prevented.

Claim 3 (currently amended): A method according to claim 36 ~~30~~, wherein successful operation of the copy protected disc requires that the disc be present in the drive and that a correct authenticating signature be readable therefrom.

Claim 4 (canceled)

Claim 5 (currently amended): A method according to claim 36 ~~30~~, wherein the provided data patterns additionally to the rapid rate of change ensure that the DSV has an absolute value significantly greater than usual.

Claim 6 (currently amended): A method according to claim 36 ~~30~~, wherein the provided data patterns are repeated patterns of values.

Claim 7 (currently amended): A method according to claim 36 ~~30~~, wherein the size of the provided data patterns is predetermined.

Claim 8 (canceled)

Claim 9 (currently amended): A method according to claim 36 ~~30~~, wherein the provided data patterns are arranged to produce a DSV which

has a substantial low frequency component lower than that of the lowest signal frequency that does not cause DSV problems.

Claim 10 (currently amended): A method according to claim 36 ~~30~~, wherein the authenticating signature is also made up of sectors containing only zeros which are provided both before and after sectors containing the data patterns.

Claim 11 (canceled)

Claim 12 (currently amended): A copy protected optical disc according to claim 37 ~~31~~, wherein the provided data patterns have a size and/or a nature which ensures that they cannot be accurately written by a writer of recordable discs.

Claim 13 (canceled)

Claim 14 (currently amended): A copy protected optical disc according to claim 37 ~~31~~, wherein the provided data patterns additionally to the rapid rate of change ensure that the DSV has an absolute value significantly greater than usual.

Claim 15 (currently amended): A copy protected optical disc according to claim 37 ~~31~~, wherein the provided data patterns are repeated patterns of values.

Claim 16 (currently amended): A copy protected optical disc according to claim 37 ~~31~~, wherein the size of the provided data patterns is predetermined.

Claim 17 (canceled)

Claim 18 (currently amended): A copy protected optical disc according to claim 37 ~~31~~, wherein the provided data patterns are arranged to produce a DSV which has a substantial low frequency component lower than that of the lowest signal frequency that does not cause DSV problems.

Claim 19 (currently amended): A copy protected optical disc according to claim 37 ~~31~~, wherein the data patterns are put in a plurality of sectors on the optical disc.

Claim 20-32 (canceled)

Claim 33 (currently amended): An optical disc copy protected according to the method of Claim 36 ~~30~~.

Claim 34 (currently amended): A method according to Claim 36 ~~30~~, wherein the provided data patterns have a size and/or a nature which ensures that they cannot be accurately written by a writer of recordable discs.

Claim 35 (currently amended): A method according to Claim 36 ~~30~~, wherein the data patterns are put in a plurality of sectors on the optical disc.

Claim 36 (new): A method of copy protecting an optical disk comprising:

providing data patterns such that the data patterns cannot be accurately copied onto another disc by a writer for recordable discs which has a limited ability to look ahead during encoding, wherein the data patterns have a DSV (digital sum value) which has a rapid rate of change over time;

the data patterns making up an authenticating signature;

subjecting the data patterns to a first exclusive Or (XOR) scrambling algorithm;

applying the scrambled data patterns of the authenticating signature and other data to the optical disc in a mastering process, the mastering process including:

using a laser beam recorder controlled by an encoder which has a larger ability to look ahead than the writer;

encoding the scrambled data patterns using EFM (eight to fourteen modulation) with a second XOR scrambling algorithm having the same pattern of scrambling data as the first XOR scrambling algorithm; and

applying the twice scrambled data patterns and the other data to the optical disk;

wherein transitions in the EFM signal from the applied data patterns are shifted from their ideal values, or the ability of disc drives to maintain optimal beam positioning is compromised, by the twice scrambled data patterns.

Claim 37 (new): An optical disc carrying a plurality of pits and lands in its surface, each defining a state transition and thereby defining data, the data comprising:

data patterns, the data patterns being originally such that the data patterns cannot be accurately copied onto another disc by a writer for recordable discs which has a limited ability to look ahead during encoding, wherein the original data patterns have a DSV (digital sum value) which has a rapid rate of change;

the data patterns making up an authenticating signature;

wherein the original data patterns having been subjected to an exclusive Or (XOR) scrambling algorithm;

the scrambled data patterns of the authenticating signature and other data having been applied to the optical disc in a mastering process, wherein the mastering process includes using a laser beam recorder controlled by an encoder which has a larger ability to look ahead than the writer;

the scrambled data patterns having been encoded using EFM (eight to fourteen modulation) with a second XOR scrambling algorithm having the same pattern of scrambling data as the first XOR scrambling algorithm; and

the twice scrambled data patterns and other data having been applied to the optical disk;

wherein transitions in the EFM signal from the applied data patterns are shifted from their ideal values, or the ability of disc drives to maintain optimal head positioning is compromised by the twice scrambled data patterns.